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| 10/078,883 | 02/19/2002 | Raymond John Balzer | 10010880-1 | 6255 |

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EXAMINER

TRIMMINGS, JOHN P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2133

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,883

Applicant(s)

BALZER, RAYMOND JOHN

Examiner

John P Trimmings

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-26 are presented for examination.

Information Disclosure Statement

The examiner has considered the applicant's Information Disclosure of 7/21/2003.

Response to Amendment

The examiner acknowledges and approves the applicant's preliminary amendment of 5/31/2002.

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). Misnumbered claims 22-25 been renumbered 22-26.

Drawings

1. The drawings are objected to because FIG.s 3-8 each hold the TEST-LOGIC-RESET state with a TMS="0" when it should be a "1". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

Application/Control Number: 10/078,883
Art Unit: 2133

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: page 8 line 11 cites "and inductance", but the examiner believes it should read, "an inductance". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being obvious over Parker et al., U.S. Patent No. 6243843, and in view of Beausang et al., U.S. Patent No. 6012155.

Application/Control Number: 10/078,883
Art Unit: 2133

The applied reference of Parker et al. has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

As per Claims 1 and 9:

Parker et al. teaches a method or apparatus for recovering from a failure induced by ground bounce causing unexpected states in a TAP controller (column 5 lines 30-45). However, Parker et al. fails to teach; during a boundary scan test, a method comprising the step of operationally transitioning a Test Access Port controller from any of at least three undetermined controller states to a determined controller state. But in

Application/Control Number: 10/078,883

Art Unit: 2133

an analogous art, Beausang et al. does teach this feature in FIG.10 and beginning at column 9 line 23, ending at column 12 line 47, where the state transitions from any of the 16 states to the TEST-LOGIC-RESET state. And in column 2 lines 45-60, Beausang et al. cites advantages, one being the capability to verify the state of the TAP controller. One with ordinary skill in the art at the time of the invention, motivated as suggested, would find it obvious to include the process of Beausang et al., to recover to a known TAP state, with the ground bounce failure of Parker et al. in order to provide better failure recovery.

As per Claims 2, 3 and 5:

Parker et al. further teaches the method recited in claim 1 wherein the at least three undetermined controller states are selected from the group consisting of an UPDATE state, a RUN-TEST/IDLE state, a SELECT-DR-SCAN state, and a CAPTURE-DR state. Column 9 line 23, ending at column 12 line 47 teaches that any of the 16 states of an 1149.1 compliant TAP controller are recovered to a determined state (TEST-LOGIC-RESET). That would include the above states. And based on the motivation previously stated, the claims are rejected.

As per Claims 4, 7 and 8:

Parker et al. further teaches the method recited in claim 1 wherein the determined controller state is UPDATE-DR (column 5 lines 45-58). One with ordinary skill in the art at the time of the invention, based on starting at the determined state of TEST-LOGIC-RESET (column 12 lines 1-47), would apply the following sequence to

Application/Control Number: 10/078,883

Art Unit: 2133

arrive at UPDATE-DR: 0-1-0-1-1. And based on the motivation previously stated, the claims are rejected.

4. Claims 6 and 10-26 are rejected under 35 U.S.C. 103(a) as being obvious over Parker et al., U.S. Patent No. 6243843, and in view of Beausang et al., U.S. Patent No. 6012155, and further in view of the applicant's admitted prior art.

As per Claims 6 and 10:

The prior art cited in the 2nd paragraph of page 10 of the applicant's Disclosure, teaches further limiting the method recited in claim 1, wherein the controller transitioning step further comprises the step of providing a low Test Mode Select input to the TAP controller prior to a falling edge of a clock signal while in an UPDATE state. And, in view of the motivation to improve ground bounce suppression stated in the same Disclosure reference, one with ordinary skill in the art at the time of the invention would find it obvious to combine the prior art with the Claim 1 references, and so the claims are rejected.

As per Claims 12-14 and 18:

Parker et al. further teaches the apparatus recited in claims 10, 11 and 17, wherein the at least four undetermined controller states are selected from the group consisting of an UPDATE state, a RUN-TEST/IDLE state, a SELECT-DR-SCAN state, and a CAPTURE-DR state. Column 9 line 23, ending at column 12 line 47 teaches that any of the 16 states of an 1149.1 compliant TAP controller are recovered to a determined state (TEST-LOGIC-RESET). That would include the above states. And based on the motivation previously stated, the claims are rejected.

As per Claims 11, 15 and 16:

Parker et al. further teaches the apparatus recited in claims 10, 14 and 13, and wherein the determined controller state is UPDATE-DR (column 5 lines 45-58). One with ordinary skill in the art at the time of the invention, based on starting at the determined state of TEST-LOGIC-RESET (column 12 lines 1-47), would apply the following sequence to arrive at UPDATE-DR: 0-1-0-1-1. And based on the motivation previously stated, the claims are rejected.

As per Claim 17:

Parker et al. teaches a boundary scan apparatus that recovers from ground bounce failure, and wherein the determined controller state is UPDATE-DR (column 5 lines 45-58). One with ordinary skill in the art at the time of the invention, based on starting at the determined state of TEST-LOGIC-RESET (column 12 lines 1-47), would apply the following sequence to arrive at UPDATE-DR: 0-1-0-1-1. But Parker fails to teach a low level TMS signal at UPDATE-DR. However, the prior art cited in the 2nd paragraph of page 10 of the applicant's Disclosure, teaches further limiting the apparatus, wherein the controller further comprises of providing a low Test Mode Select signal to the TAP controller prior to a falling edge of a clock signal while in an UPDATE state. And, in view of the motivation to improve ground bounce suppression stated in the same Disclosure reference, one with ordinary skill in the art at the time of the invention would find it obvious to combine the prior art with the Claim 1 references, and so the claims are rejected.

As per Claims 19 and 20:

Parker et al. further teaches the apparatus recited in claims 17 and 18, and wherein the determined controller state is UPDATE-DR (column 5 lines 45-58). One with ordinary skill in the art at the time of the invention, based on starting at the determined state of TEST-LOGIC-RESET (column 12 lines 1-47), would apply the following sequence to arrive at UPDATE-DR: 0-1-0-1-1. And based on the motivation previously stated, the claims are rejected.

As per Claim 21:

Beausang et al. further teaches the apparatus recited in claim 17 wherein the in-circuit tester is further configured to operationally transition the Test Access Port controller from an undetermined data state to a determined data state (beginning at column 9 line 23, ending at column 12 line 47, where the state transitions from any of the 16 states to the TEST-LOGIC-RESET state). And in view of the motivation previously stated, the claim is rejected.

As per Claim 22:

Beausang et al. further teaches the apparatus recited in claim 21 wherein said data state transition begins when the Test Access Port controller has reached the UPDATE-DR state, or any other of the 16 states (column 9 line 23, to column 12 line 47). And in view of the motivation previously stated, the claim is rejected.

As per Claims 23-26:

Parker et al. further teaches a plurality of controllers in FIG.2, and in view of the motivation previously stated, the claims are rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P Trimmings whose telephone number is 703-305-0714. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John P Trimmings
Examiner
Art Unit 2133

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